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ProductInformation

Anti-Focal Adhesion Kinase (pp125^{FAK})
Cy3 Conjugate
Developed in Rabbit
IgG Fraction of Antiserum

Product Number **C 7613**

Product Description

Anti-Focal Adhesion Kinase (pp125^{FAK}) is developed in rabbit using as immunogen a synthetic peptide corresponding to the C-terminal region amino acid residues 1039-1052 of human, mouse, or rat focal adhesion kinase, conjugated to KLH. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins. The conjugate is prepared by conjugation of the IgG fraction to Cy3*, and the conjugate is purified by gel filtration to remove unbound Cy3 fluorophore.

Anti-Focal Adhesion Kinase (pp125^{FAK}) Cy3 conjugate recognizes human, mouse, rat, and bovine focal adhesion kinase. The conjugate may be used for direct immunofluorescence staining using methanol/acetone fixed cultured cells.

Focal adhesion kinase (pp125^{FAK}, FAK1, FADK1) is a 125 kDa intracellular protein tyrosine kinase, which co-localizes primarily with several components of the cellular focal adhesions such as tensin, vinculin, and talin.[1-5] FAK1 and FAK2/PYK2/CAKβ are members of a family of non-receptor kinases. FAK1 comprises a highly conserved tyrosine kinase catalytic domain flanked by large amino and C-terminal domains. The SH2 and SH3 motifs found in other cytoplasmic protein tyrosine kinases are lacking. The C-terminal domain (FAT sequence) (159 amino acids) directs the association of FAK with cellular focal adhesions of cultured cells.[6] In certain cells, this domain is autonomously expressed as a 41-43 kDa polypeptide (FRNK, FAK-related non-kinase).[7]

FAK1 is highly conserved across species and is expressed in most cell lines and tissues. It is especially abundant in brain. FAK1 is a major phosphotyrosine-containing protein in normal avian and rodent fibroblasts. Its phosphorylation is enhanced in cells transformed by oncogenic variants of pp60^{src}, in fibroblasts, platelets, and carcinoma cells following integrins-extracellular matrix components engagement or integrins cross-linking by antibodies. Increased FAK1 phosphorylation is also found in cultured cells exposed to mitogenic neuropeptides or neurotransmitters[8] and during development. Activated FAK1 interacts with several adaptor proteins, signal transduction molecules, and cytoskeletal proteins.[9-13] Focal adhesion kinase is involved in cell spreading, migration, growth factor signaling, cell cycle progression, and survival promotion.[9-14] FAK1 has also been implicated in adhesion and internalization of pathogenic bacteria.[15,16]

Reagent

Anti-Focal Adhesion Kinase (pp125^{FAK}) Cy3 conjugate is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin (BSA) and 15 mM sodium azide.

IgG Concentration: Approx. 4 mg/ml
Molar Ratio (F/P): 3-9

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use and extended storage, store at 2-8 °C. Working dilution samples should be discarded if not used within 12 hours. Store the product protected from light.

Product Profile

For indirect immunofluorescence, a working antibody dilution of 1:600-1:1,200 is recommended using methanol-acetone fixed bovine MDBK cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

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